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## 1383.0.55.001 - Measures of Australia's Progress: Summary Indicators, 2005

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[Statisticians ask the question  
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### ABOUT THIS RELEASE

Presents the key 15 dimensions of Australia's progress. It provides a national summary of the most important areas of progress, presenting them in a way which can be quickly understood by all Australians. It informs and stimulates public debate and encourages all Australians to assess the bigger picture when contemplating progress.

See also 1383.0.55.002

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**Measures of Australia's Progress: Summary Indicators 2005** focuses on the 15 headline dimensions and their headline indicators (some headline dimensions have more than one indicator, and some have none). Only the headline indicators are graphed. However, the dimensions without a headline indicator still mention in their commentaries indicators which attempt to measure one or more essential aspects in these dimensions. All indicators are based on the most recent data available at 20 April 2005.

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### Introduction - why the ABS developed Measures of Australia's Progress

Recent years have seen growing public interest in assessing whether life in Australia and other countries is getting better, and whether the level of (or pace of improvement in) the quality of life can be sustained into the future. Although most regard Gross Domestic Product (GDP) as an important measure of progress, there are many who believe that it should be assessed in conjunction with other measures of progress. This is the prime reason the ABS looked for an alternative approach.

A national statistical agency like the ABS has an important role to play in providing the statistical evidence that will allow assessments of progress to be made by users - those who formulate and evaluate policy, researchers and the community. Through its publications, electronic releases of data and other means, the ABS provides a rich array of statistics relevant to assessing progress. But the very size of the information base means that it is not so accessible to many people. Moreover, most ABS products provide a window into one or a few aspects of life in Australia - say, health, education, income, water - whereas a comprehensive assessment of progress demands that these aspects of life are examined together.

In response, ABS has produced **Measures of Australia's Progress** (MAP) which provides a digestible selection of statistical evidence that will allow Australians to make their own assessment of whether life in Australia is getting better. MAP is not intended as a substitute for the full array of statistics - indeed, the ABS hopes that many readers will be led to read our other publications on the aspects of society, the economy and the environment that particularly interest them.

### Choosing the progress indicators

The progress indicators presented in MAP were chosen in four key steps.

- First, we defined three broad domains of progress (social, economic and environmental).
- Second, we made a list of potential progress dimensions within each of the three domains.
- Third, we chose a subset of dimensions, 15 in all, for which we would try to find indicators.
- Fourth, we chose an indicator (or indicators) to give statistical expression to each of those dimensions. To achieve this we identified potential 'headline' indicators which have the capacity to encapsulate major features of change in the given aspect of Australian life.

The set of headline indicators plays a special role in MAP, and particular considerations of values and preferences arise. [MAP 2002](#) and [MAP 2004](#) presented several hundred indicators overall. However, to assist readers in gaining a quick understanding of the bigger picture about national progress, these publications also presented a more compact suite of 15 headline indicators, covering the 15 dimensions (some dimensions have more than one indicator, and some have none). **Measures of Australia's Progress: Summary Indicators 2005** focuses on these headline indicators.

Our eventual selection of indicators was guided by expert advice and by the criteria described in [Criteria for choosing headline indicators](#) . One criterion was regarded as essential to headline indicators - namely, that most Australians would agree that each headline indicator possessed a 'good' direction of movement (signalling progress, when that indicator is viewed alone) and a 'bad' direction of movement (signalling regress, when that indicator is viewed alone). This good-direction / bad-direction distinction raises unavoidably the question of values and preferences.

Once the ABS had drafted its initial list of candidate headline indicators, it undertook extensive consultation to test whether the list accorded with users' views. After the release of the first edition of MAP in 2002, some commentators disagreed with our choice of headline indicators, usually on the grounds of knock-on effects or interactions - that is, the good/bad direction of change may be ambiguous when one takes into consideration the real-world associations between movements in the headline indicator and movements in other indicators. Whether a reader agrees with the ABS choice of headline indicators or not, he or she is free to peruse the whole suite of several hundred indicators in [MAP 2002](#) and [MAP 2004](#) and to assign high weight, low weight or no weight to each, as his or her own values and preferences dictate.

Some readers of MAP have tried to infer an ABS view about the relative importance of the different aspects of Australian life from the number of aspects discussed under the social, economic and environmental headings, or from the number of headline indicators or the number of indicators overall. No such inference can or should be drawn. It is not for the national statistical agency to say what relative importance should be accorded to, say, changes in health, income or air quality. The ABS based its decision about how many indicators to present not on relative value but on statistical grounds - is it possible to find one or a few indicators that would encapsulate the changes in the given aspect of life? Is it possible to sum or otherwise combine indicators?

To illustrate - changes in national wealth can be summarised well in one indicator (real net worth per capita), whereas a range of indicators are needed to depict significant changes in families, communities and social cohesion.

The place of values and preferences in MAP is well illustrated by its treatment of income distribution and equity. Many Australians believe that a more even distribution of income would represent progress; some would argue that, other things equal, any shift to more even distribution would be an improvement; others would argue only for a somewhat more even distribution than at present - say, one that reduces extreme disparities between high and low incomes. Other Australians would not accept that more even distribution of income would represent progress. Thus, when developing MAP, the ABS decided that measures of income distribution should appear only as supplementary indicators, not as headline indicators.

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[Contents](#) >> Progress in Australia: The headline dimensions

The following commentaries on the 15 headline dimensions are structured around four broad areas of progress:

- [Individuals](#)
- [The economy and economic resources](#)
- [The environment](#)
- [Living together in our society](#)

The table below shows the grouping of the headline dimensions under these areas of progress, and provides points of interest from the following commentaries for each dimension.

Individuals	The economy and economic resources	The environment	Living together in our society
<p><b>Health:</b> 1993 - 2003, Life expectancy increases for men and women.</p> <p><b>Education and training:</b> 1994 - 2004, More Australians obtain a non-school qualification.</p>	<p><b>National income:</b> 1993-94 - 2003-04, Australia experiences significant real income growth.</p> <p><b>Financial hardship:</b> 1994-95 - 2002-03, The real income of low income Australians increases.</p>	<p><b>The natural landscape:</b> 1993 - 2004, Some of the indicators suggest regress in this dimension.</p> <p><b>The human environment:</b> 1997 - 2003, Air quality is generally good, even though</p>	<p><b>Family, community and social cohesion:</b> 1995 - 2002, More Australians are participating in voluntary work.</p> <p><b>Crime:</b> 1993 - 2002, Rates of personal crime increase slightly, and household crime rates change little.</p>



<p><b><u>Work:</u></b> 1994 - 2004, The unemployment rate generally decreases.</p>	<p><b><u>National wealth:</u></b> 1994 - 2004, Australia's real net worth per capita rises.</p> <p><b><u>Housing:</u></b> 2001, Housing in Australia is generally good.</p> <p><b><u>Productivity:</u></b> 1993-94 - 2003-04, Australia experiences productivity improvement.</p>	<p>forest fires have obscured this trend.</p> <p><b><u>Oceans and estuaries:</u></b> 2002, Most estuaries are largely unmodified and many are pristine.</p> <p><b><u>International environmental concerns:</u></b> 1992 - 2002, Greenhouse gas emissions generally rise.</p>	<p><b><u>Democracy, governance and citizenship:</u></b> 1996 - 2001, More long-term overseas-born residents are becoming citizens.</p>
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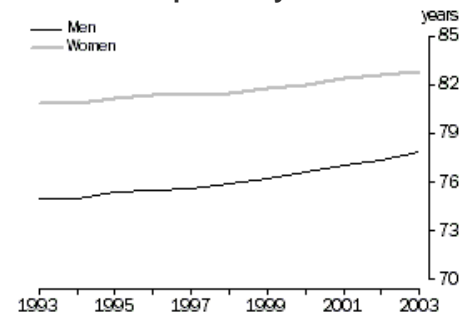
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[Contents](#) >> The headline dimensions: Individuals

When measuring progress for individuals, we consider three headline dimensions - Health; Education and training; and Work. All three indicators for Individuals suggest progress during the past decade.

### Health: Life expectancy at birth

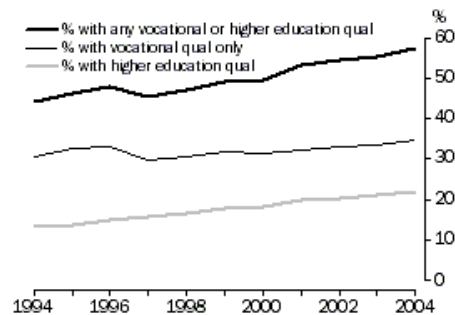


[For technical information see Endnote 1.](#)

Source: Deaths, Australia, 2003, cat. no. 3302.0.

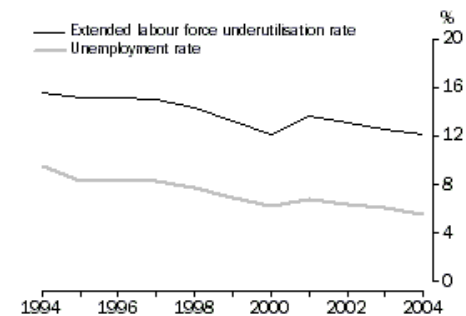
**Education and training:**  
People aged 25-64 with a vocational or higher education qualification

**Work:**  
Unemployment and extended labour force underutilisation rates



For technical information see [Endnote 2](#).

Source: Survey of Education and Work, Australia, 2004, cat. no. 6227.0.



For technical information see [Endnote 3](#).

Source: Australian Labour Market Statistics, April 2005, cat. no. 6105.0.

Commentaries for headline dimensions: [Health](#) ; [Education and training](#) ; and [Work](#) .

## Health

Life expectancy at birth is a measure of how long someone born in a particular year might expect to live if mortality patterns for that year remained unchanged over their lifetime. It is one of the most widely used indicators of population health. It focuses on length of life rather than its quality, but it usefully summarises the health of the population.

Australian life expectancy improved during the decade 1993 to 2003. A boy born in 2003 could expect to live to be nearly 78, while a girl could expect to reach nearly 83 - increases since 1993 of three and two years respectively. Women tend to live longer than men, and this is reflected in the differences in life expectancy throughout the 20th century. Although a girl born in 2003 could still expect to live more than five years longer than a boy, in recent years life expectancy at birth for men increased more quickly than for women.

While Australians are living longer than ever before, there is a good deal of debate about whether life expectancy will continue to increase. However, there is no doubt that there is more room for improvement among some groups of the population than among others. In particular, Indigenous Australians do not live as long as other Australians, and the difference is marked.

## Education and training

Education and training help people to develop knowledge and skills that may be used to enhance their own living standards and those of the broader community. For an individual, educational attainment is widely seen as a key factor to a rewarding career. For the nation as a whole, having a skilled workforce is vital to supporting ongoing economic development and improvements in living conditions.

The progress indicator used here measures the attainment of formal non-school qualifications. This headline indicator is the proportion of the population aged 25-64 with a vocational or higher education qualification ([Endnote 2](#)). The indicator shows that there has been a rise in the proportion of people with non-school qualifications. Between 1994 and 2004 the proportion of 25-64 year olds with a vocational or higher education qualification rose from 44% to 58%, continuing a trend seen for many decades.

The increase over the last decade in the proportion of people with non-school qualifications is mainly being driven by the substantial increase in the proportion of people with a higher education qualification (i.e. a bachelor degree or above). Between 1994 and 2004, the proportion of

people aged 25-64 with a higher education qualification increased from 13% to 22%. This was more than double the increase in the proportion of people whose highest qualification was a vocational qualification, which rose from 31% to 35% over the same period.

## Work

Paid work is the means through which most people obtain the economic resources needed for day to day living, for themselves and their dependants, and to meet their longer term financial needs. Having paid work contributes to a person's sense of identity and self-esteem. People's involvement in paid work also contributes to economic growth and development. The official unemployment rate has been chosen as the headline indicator, because of its relevance to the economic and social aspects of work.

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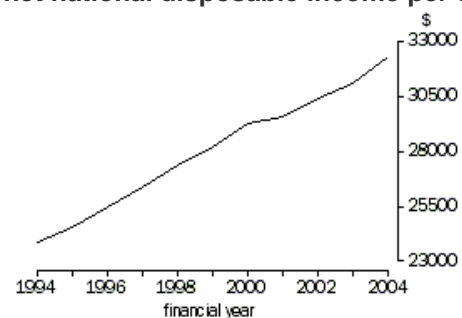
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[Contents](#) >> The headline dimensions: The economy and economic resources

When measuring progress for the economy and economic resources, we consider five headline dimensions (although indicators are only available for four) - National income; Financial hardship; National wealth; Housing; and Productivity. The headline indicators available suggest some progress for these dimensions over the past decade.

**National income:**  
Real net national disposable income per capita



[For technical information see Endnote 4 .](#)

Source: Australian System of National Accounts 2003-2004, cat. no. 5204.0.

**Financial hardship:**  
Average real equivalised weekly disposable income



[For technical information see Endnote 5 .](#)

Source: Household Income and Income Distribution, Australia, 2002-03, cat. no. 6523.0.

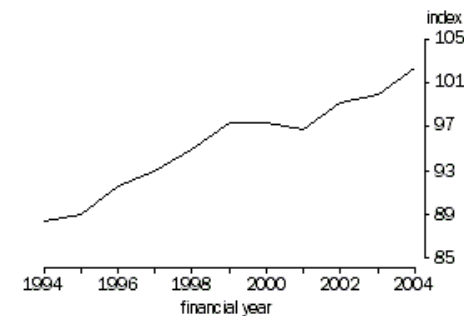
**National wealth:**  
Real national net worth per capita

**Productivity:**  
Multifactor productivity



[For technical information see Endnote 6](#).

Source: Australian System of National Accounts 2003-2004, cat. no. 5204.0.



Source: Australian System of National Accounts 2002-2003, cat. no. 5204.0.

Commentaries for headline dimensions: [National income](#); [Financial hardship](#); [National wealth](#); [Housing](#); and [Productivity](#).

## National income

National income reflects Australia's capacity to purchase goods and services. It influences material living standards and is also important for other aspects of progress. There are many different ways of measuring income. The headline measure - real net national disposable income per capita - has a variety of features that make it an informative indicator of national progress.

- It is a per capita measure. Total income could rise during periods of population growth, even though there may have been no improvement in Australians' average incomes.
- It is a real measure - it is adjusted to remove the effects of price change. Nominal or current price income could rise during periods of inflation, even though there may have been no increase in Australians' real capacity to buy goods and services.
- It takes account of income flows between Australia and overseas, and is adjusted for changes in the relative prices of our exports and imports (our 'terms of trade'). These international influences on Australia's income can increase or decrease Australians' capacity to buy goods and services.
- It is a net measure - it takes account of the depreciation of machinery, buildings and other produced capital used in the production process. Hence, it reflects the income Australia can derive today while keeping intact the fixed capital needed to generate future income.

Australia experienced significant real income growth during the past decade. Between 1993-94 and 2003-04, real net national disposable income per capita grew by an average annual rate of 3.1% a year.

## Financial hardship

Society generally accepts that people should have access to some minimum standard of consumption of goods and services. People in financial hardship do not have the economic resources to enjoy such an opportunity, and are likely to have relatively low income and low wealth. The headline indicator focuses on changes in the average disposable (after tax) income of people close to the bottom of the income distribution ([Endnote 5](#)). Although it provides no information about the number of people living in financial hardship, it does indicate whether the income of low income groups is rising or falling.

From 1994-95 to 2002-03 the real income of low income Australians rose by 12%. For those people who were in this income grouping for the entire period, their rising incomes would on average have provided a capacity to increase their real standard of living, other things being equal. While some would interpret this increase in the real income of the low income group as progress, others would consider that it also needs to be weighed against changes in community standards. Although there is no direct measure of these, one approach is to compare changes with those of 'middle' Australians. And so the graph also shows changes in the real income of the middle income group, which grew by 14%.

The headline indicator considers low income which is commonly associated with financial hardship. However, financial hardship is a multidimensional issue and is also often associated with problems such as lack of participation in work, substance abuse, poor health, poor education, poor housing, crime, social exclusion and a lack of opportunity for children. It can also be associated with changes in life fortunes.

### **National wealth**

National wealth and national income are very closely related. Along with the skills of the work force, a nation's wealth has a major effect on its capacity to generate income. Produced assets (such as machinery and equipment) are used in income-generating economic activity. Income, in turn, provides for saving that enables the accumulation of new wealth. 'Real national net worth per capita' exhibits features that make it an informative indicator of national progress.

- It is a net measure - it shows the amount by which Australia's assets exceed its liabilities to the rest of the world.
- It is a per capita measure. Total wealth could rise if the population grew, even though there may have been no improvement in Australians' average wealth.
- It is a real measure - it is adjusted to remove the effects of price change.

Between June 1994 and June 2004, Australia's real net worth per capita rose at an average annual rate of 0.8%. However, the headline indicator does not take account of everything that might be regarded as valuable. For example, it doesn't include - native forests and other natural assets not used for economic production; or human capital (e.g. knowledge and skills); or social capital (e.g. social networks and trust).

### **Housing**

Housing provides people with shelter, security and privacy. Having a suitable place to live is fundamental to people's identity and wellbeing, and there are many aspects to housing that affect the quality of people's lives. Dwelling attributes, such as their size, number of bedrooms, physical condition, location relative to amenities and services, and their affordability, are all important in this regard but there is currently no single indicator that succinctly captures whether people's many needs and desires for suitable housing are being met.

Housing in Australia is generally good, and Australians are continuing to invest significantly in the homes that they own. In the decade to 2004, the value of land and dwellings owned by the household sector increased by 150% (in current price terms) and in 2004 represented more than half of the value of all assets owned by the sector.

Australians are tending to live in smaller household groups, with the average household size shrinking by 14% over the 20 years to 2001. While 4% of private dwellings across Australia in 2001 required an extra bedroom to accommodate the residents of those dwellings, 75% of private dwellings had one or more bedrooms spare. But poor or inadequate housing is currently a problem for some groups, especially for Aboriginal and Torres Strait Islander peoples living in remote areas.

### **Productivity**

A nation's productivity is the volume of goods and services it produces (its output) for a given volume of inputs (such as labour and capital). A nation that achieves productivity growth produces more goods and services from its labour, capital, land, energy and other resources. Much, but not all of Australia's output growth can be accounted for by increases in the inputs to production. The amount by which output growth exceeds input growth is the productivity improvement. Productivity growth can generate higher incomes. Benefits might also accrue in the form of lower output prices.

Productivity can be measured in a variety of ways. The most comprehensive Australian measure available at present is multifactor productivity for the market sector. Multifactor productivity represents that part of the growth in output that cannot be explained by growth in labour and capital inputs. During the decade 1993-94 to 2003-04, Australia experienced improved rates of productivity growth and multifactor productivity rose 1.5% per year on average.

During the past few decades, successive Australian governments have enacted reforms that have sought to create an economic environment favourable to increased competition, better allocation of resources and more innovation. Key policy influences have included reduction of tariffs and other barriers to international trade, relaxation of barriers to international investment, changes to the structure and rates of taxation, domestic competition policy and reforms to financial, labour and other markets. Economists continue to investigate the links each of these varied influences has on productivity growth, and many are not yet well understood.

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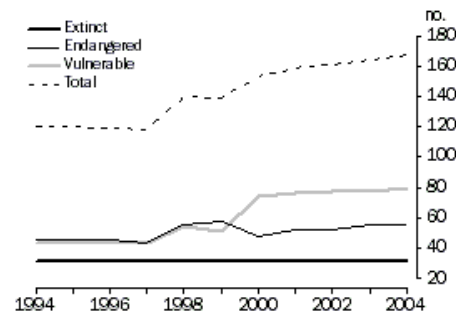
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[Contents](#) >> The headline dimensions: The environment

When measuring progress for the environment, we consider four headline dimensions - The natural landscape; The human environment; Oceans and estuaries; and International environmental concerns. It is difficult to obtain national time series data that encapsulate the changes in Australia's natural resources. However, for those dimensions where such data are available, progress over the past decade was varied.

### The natural landscape: Biodiversity: Extinct, endangered and vulnerable birds and mammals

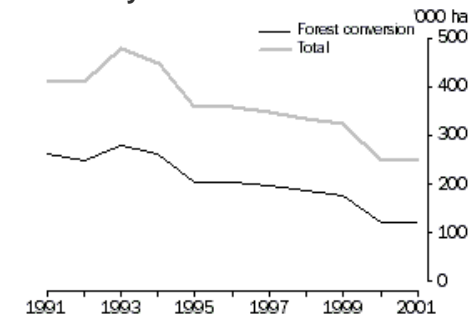


[For technical information see Endnote 7.](#)

Source: National List of Threatened Fauna,  
Department of the Environment and Heritage, 2004.

The natural landscape:  
Land: Assets affected by, or at risk from, salinity - 2000

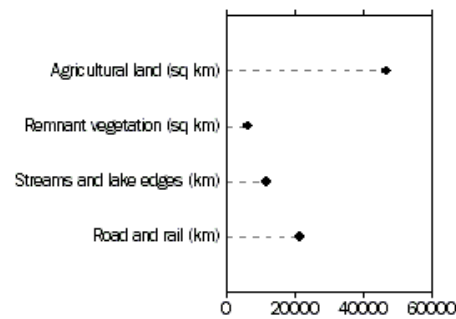
### The natural landscape: Biodiversity: Annual area of land cleared



[For technical information see Endnote 8.](#)

Source: National Greenhouse Gas Inventory,  
Australian Greenhouse Office 2003.

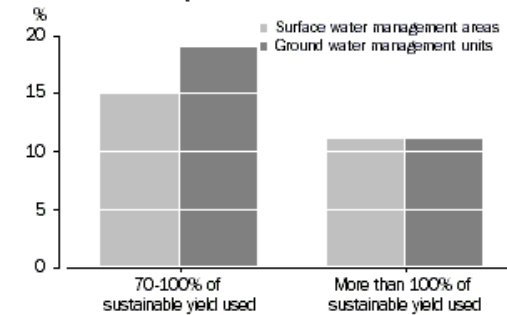
The natural landscape:  
Inland waters: Highly developed and



[For technical information see Endnote 9.](#)

Source: Australian Dryland Salinity Assessment 2000,  
National Land and Water Resources Audit 2001.

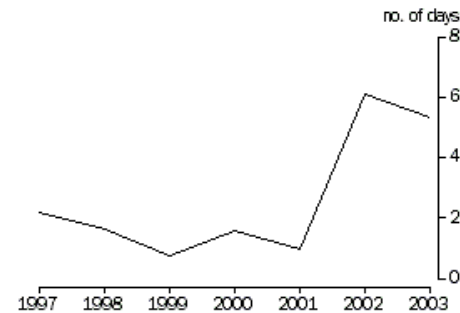
#### overdeveloped water sources - 2000



[For technical information see Endnote 10.](#)

Source: Australian Water Resources Assessment 2000,  
National Land and Water Resources Audit 2001.

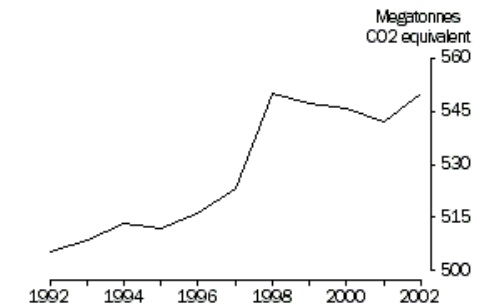
#### The human environment: Urban air quality, days fine particle health standards were exceeded



[For technical information see Endnote 11.](#)

Source: State environmental protection agencies, 2004.

#### International environmental concerns: Australia's net greenhouse gas emissions



[For technical information see Endnote 12.](#)

Source: National Greenhouse Gas Inventory,  
Australian Greenhouse Office 2004.

Commentaries for headline dimensions: [The natural landscape](#); [The human environment](#); [Oceans and estuaries](#); and [International environmental concerns](#).

### The natural landscape - biodiversity, land, and inland waters

#### Biodiversity

No single indicator can hope to encapsulate biodiversity, and so we focus on two aspects: the numbers of extinct and threatened Australian birds and mammals; and the clearing of native vegetation.

Although the numbers of threatened birds and mammals are only a small part of the overall biological diversity, a decline in these groups of species threatens ecological processes and can point to a wider decline in biodiversity. The list should not be construed as a census of threatened species as they can be added to or removed from the list as their status changes or due to improved knowledge ([Endnote 7](#)). However, it is as accurate an accounting of the status of these species as can be currently compiled.

Between 1994 and 2004 the number of terrestrial bird and mammal species assessed as extinct, endangered or vulnerable rose by 39% from 120 to 167 (of which 66 were birds and 101 were mammals). Much of this increase took place between 1997 and 2000 and was driven mainly by the increase in the numbers of vulnerable birds and mammals. In June 2004 just under half of these species were vulnerable, one-third were more seriously threatened (endangered) and the remaining fifth were presumed extinct. There were increases in the numbers of both endangered and vulnerable species, but the rise in species assessed as vulnerable was much higher (86%) than those assessed as endangered (22%).

Land clearing destroys plants and local ecosystems and removes the food and habitat on which other native species rely. Clearing helps weeds and invasive animals to spread, causes greenhouse gas emissions and can lead to soil degradation, such as erosion and salinity, which in turn can harm water quality. Native bushland has cultural, aesthetic and recreational importance to many Australians. The land clearing estimates include information about forest conversion (land cleared for the first time) and reclearing, both of which have environmental impacts.

Land clearance decreased by about 40% between 1991 and 2001. The area of land protected in national parks and the like increased. In 2001, an estimated 248,000 ha of Australian land was cleared, down from 415,000 ha cleared in 1991. Less than half of the land cleared in 2001 (120,000 ha) was 'converted' (cleared for the first time), which is less than half the area converted in 1991. The figures do not distinguish between the kinds of vegetation cleared.

## **Land**

Australia's soils are old and shallow, and are susceptible to degradation by agricultural activities. Salinity occurs when the water table rises, bringing natural salts to the surface (in sufficient quantity, these salts are toxic to most plants). When trees or other deep-rooted vegetation are replaced with vegetation that uses less water, the water table may rise to cause dryland salinity. Dryland salinity threatens biodiversity, through loss of habitat on land and in water, and also impacts on water resources, pipelines, houses and roads. Areas near water are often worst affected because they occupy the lowest parts of the landscape where saline groundwater first reaches the surface.

In 2000, about 46,500 sq kms (4.6 million hectares) of agricultural land were already affected with a high salinity hazard or in an area at high risk from shallow watertables. The cost to agricultural productivity was estimated at \$187 million, which was less than the cost of other forms of soil degradation, such as \$1.5 billion due to acidity in the same year.

However, the costs of salinity go further as it can impact on structures, as well as flora and fauna. The salt contained in rising groundwater levels can damage bitumen and concrete and so affect roads, footpaths, housing, pipelines and other assets. In 2000, about 11,800 kms of streams and lake edges, as well as 1,600 kms of rail and 19,900 kms of roads were affected or at risk. By 2050, these figures could rise to 41,300 kms of stream and lake edges, and 5,100 km of rail and 67,400 kms of road according to projections published by the National Land and Water Resources Audit in 2001. [\(Endnote 9\)](#).

## **Inland waters**

Water is fundamental to the survival of people and other organisms. Apart from drinking water, much of our economy (agriculture in particular) relies on water. The condition of freshwater ecosystems has a critical impact on the wider environment.

In 2000, about 11% of Australia's surface water management areas were overdeveloped. Another 15% were approaching sustainable extraction limits (i.e. highly developed). Therefore, in 2000 about one-quarter of Australia's surface water management areas were classed as highly used or overused. This proportion was greater for groundwater management units, where 11% were overdeveloped, and a further 19% were highly developed [\(Endnote 10\)](#). Detailed national time series data are not available, but a variety of partial evidence points to a decline in

the quality of some of Australia's waterways.

### **The human environment**

Human settlements have an impact on the landscape and seascape that surrounds them. They can also provide a home for native plants and animals. But the environmental quality of settlements is perhaps most important because it has an influence on those who live and work within them. Several environmental concerns are associated with human settlements. It is difficult to conceive an ideal headline indicator which might measure progress against each and so we choose one. For about a decade, the Australian public has been more concerned about air pollution than about any other environmental problem.

Overall, air quality in Australia is relatively good and has generally improved during the 1990s, although there has been a rise in recorded fine particle (PM10) concentrations ([Endnote 11](#)) after 2001 mainly due to irregular events, such as forest fires. Even so, our cities do not suffer from the acute pollution problems found in many OECD countries. It is important to note that daily changes in air quality depend on ambient conditions, like wind direction and the monitoring station's proximity to pollution sources. Further, high concentrations of fine particles from irregular events, such as forest fires, can obscure the longer trend in levels produced by regular sources, like car emissions.

The 2002 peak of about six days in the graph for selected urban areas was mainly due to severe forest fires and dust storms around the Sydney area where the National Environment Protection Measures (NEPM) goal was exceeded on 13 days that year. The goal was also exceeded on six days in Brisbane in 2002, while Melbourne, Perth and Adelaide recorded two, one and no such days respectively that year. There was a decline in 2003, even though bush fires and dust storms also caused the NEPM goal to be exceeded on 10 days in Melbourne, while Sydney recorded six days. However, Brisbane and Perth only recorded one day each that exceeded the goal in 2003, and Adelaide recorded no such days.

### **Oceans and estuaries**

Australia's coastal and marine regions support a large range of species, many of them found only in Australian waters. The marine environment is also important to Australian society and the economy. Many of the ways in which we use our oceans, beaches and estuaries can affect the quality of the ocean's water and the diversity of life within it. Although this dimension has no headline indicator, it does have important aspects which different organisations have attempted to measure.

One such measure is the Estuarine Condition Index, developed by the National Land and Water Resources Audit (NLWRA). The index assesses the condition of about 1,000 estuaries around the Australian coast. Because estuaries occur at the borders of marine and freshwater ecosystems, they are influenced by the tides and also by fresh water from the land. And so measuring the condition of estuaries not only reports on the state of our oceans, it sheds light on how land use around the water that flows into the estuary is affecting the sea. The more modified an estuary the greater the pressures on it; in 2002 the NLWRA assessed estuary conditions as:

- near-pristine - 50%.
- largely unmodified - 22%.
- modified - 19%.
- extensively modified - 9%.

### **International environmental concerns**

The health of our environment depends largely on the actions of Australians. But some environmental concerns transcend national boundaries: our environment can be influenced by the actions of other countries, and we, in turn, can influence other countries' environments. Our contribution to these international concerns is an important aspect of progress. Global warming is widely perceived as the most significant

international environmental concern and Australia's greenhouse gas emissions are the focus of the headline indicator.

The main gases in the atmosphere, nitrogen and oxygen, are almost completely transparent to the sun's rays. But water vapour, carbon dioxide and other gases form a blanket around the Earth, trapping heat - a process called the **greenhouse effect**. Human activity is increasing atmospheric concentrations of existing greenhouse gases (such as carbon dioxide and methane) and adding new gases such as chlorofluorocarbons (CFCs). Net emissions are estimated using information about total emissions, less any credits from forest sinks (the credits are estimates of how much carbon dioxide has been absorbed by new and expanding forests established in Australia since 1990).

Australia's total net greenhouse emissions in 2002 were about 550 megatonnes (Mt) CO<sub>2</sub> equivalent ([Endnote 12](#)), an increase of 8.8% since 1992. Emissions generally rose over most of the period, with the sharpest rise (about 5%) between 1997 and 1998. There was a slight decline in emissions during the next three years to 2001. This was followed by an increase of 1.5% between 2001 and 2002, which returned total net greenhouse emissions to their 1998 level (550 Mt CO<sub>2</sub> equivalent).

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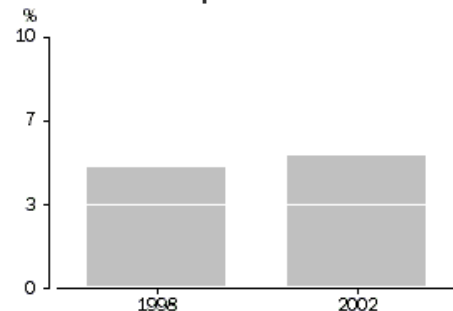
Statisticians ask the question

"Is life in Australia getting better?" (Media Release)

[Contents](#) >> The headline dimensions: Living together in our society

When measuring progress for Living together in our society, we consider three headline dimensions - Family, community and social cohesion; Crime; and Democracy, governance and citizenship. However, headline indicators are only available for the second dimension.

**Crime:**  
**Victims of personal crimes**



[For technical information see Endnote 13.](#)

Source: Crime and Safety, Australia, 2002, cat. no. 4509.0.

**Crime:**  
**Victims of household crimes**



[For technical information see Endnote 14.](#)

Source: Crime and Safety, Australia, 2002, cat. no. 4509.0.

Commentaries for headline dimensions: [Family, community and social cohesion](#); [Crime](#); and [Democracy, governance and citizenship](#).

### Family, community and social cohesion

Family and community are important aspects of society, but there is no single indicator that captures all that might be important. The quality

and strength of people's relationships and bonds with others - their family, friends and the wider community - are important ingredients of the level of social cohesion. And a more cohesive society is one in which communities are strong and inclusive, and where fewer people 'fall through the cracks'. When the support offered by people's families and communities declines or is absent, it can contribute to serious social exclusion and problems.

The family can be seen as the wellspring from which some of the dimensions crucial to social cohesion develop, such as trust, social support and the extension of social networks. Most Australians live in households as members of a family unit. A key role of families is to raise capable and functioning people. In 2004, 40% of the 5.5 million families in Australia contained children under 15. While the majority of these families were couple families (77%), between 1994 and 2004 the proportion of one parent families with children under 15 increased from 17% to 23%. Most one parent families are supported by government and many by family, friends and ex-partners. Nevertheless, one parent families generally have a much lower level of economic wellbeing than couple families. In 2002, about 12% of couple families with dependents had an equivalised household income in the bottom 20%, compared with about 40% of one parent families with dependents. ([Endnote 15](#))

The vast range of services provided within communities by groups, clubs and charitable organisations are a crucial adjunct to the care provided by families and the institutionalised care provided by governments. Strong community bonds can be formed through things like volunteering and donating money to groups and organisations in the community. The likelihood that people will voluntarily give their time to do some work for an organisation or group might be regarded as one of the stronger expressions of social capital, as it involves providing assistance, fulfilling needs and providing opportunities in the community. Between 1995 and 2002, the proportion of people aged 18 years and over who reported that they did some voluntary work during the previous 12 months increased from 24% to 34%.

## **Crime**

Crime takes many forms and can have a major impact on the wellbeing of victims, their families and friends, and the wider community. Those most directly affected may suffer financially, physically, psychologically and emotionally, while the fear of crime can affect people and restrict their lives in many ways. There are other costs as well, including the provision of law enforcement services by the police, courts and associated legal services, and corrective services.

Although it would be desirable to have a single indicator of the cost of crime to society, one does not exist. Instead the headline indicators are two measures of victims of common criminal offences: 'household crimes' and 'personal crimes'. The former refers to actual or attempted break-in and motor vehicle theft. The latter refers to assault, sexual assault or robbery. Personal crimes are not restricted to crimes committed in the victim's home, and so include crimes at people's place of work or study and so on. The victimisation rates for personal crimes are for assault and robbery victims among people aged 15 or over, and sexual assault among people aged 18 and over. The victimisation rates for household crimes are for actual or attempted break-ins and motor vehicle thefts across all households.

Though small, the changes in the prevalence rates for victims of personal crimes between 1998 and 2002 showed an increase from 4.8% to 5.3%. Most of these people were assaulted. Between 1993 and 2002, there was little change in the proportion of households that were the victim of a household crime (an actual or attempted break-in or motor vehicle theft) and it remained at a little below 9%.

## **Democracy, governance and citizenship**

National life is influenced, not just by material qualities such as economic output, health and education, but also by many intangible qualities such as the quality of our public life, the fairness of our society, the health of democracy and the extent to which citizens of Australia participate actively in their communities or cooperate with one another. Whilst democracy is supported globally, there are many different views about the ways to measure progress in this dimension. There are many possible indicators that relate to governance, democracy and citizenship.

It has been argued that a healthy democracy needs citizens who care, are willing to take part, and are capable of helping to shape the common agenda of a society. And so participation - whether through the institutions of civil society, political parties, or the act of voting - is seen as important to a stable democracy. In Australia, enrolment and voting in State and Federal elections is compulsory. In June 2004, the Australian Electoral Commission (AEC) estimated that 95% of eligible Australians were enrolled to vote. However, there were differences in the proportions enrolled among different age groups and the AEC estimates that 80% of eligible 18-25 year olds were enrolled. ([Endnote 16](#))

Only Australian citizens can vote in elections, and so the proportion of people living here permanently who are citizens is one measure of support for democratic decision making in Australia (although people become citizens for many reasons, not necessarily to vote in elections). In 2001, about 95% of the people living in Australia were citizens. However, not all people residing in Australia are eligible for citizenship. Therefore, when considering progress it can be more informative to consider the changing proportion of Australian residents who have lived here for at least two years (those generally eligible for citizenship) who are citizens. In 1991, about 65% of long-term overseas-born residents were Australian citizens. This had risen to just below 73% by 1996 and by 2001 almost 75% of overseas-born residents were Australian citizens. However, changes in this indicator may be affected by changes in the number of long-term residents who are eligible for citizenship.

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1. Data for 1993 and 1994 are based on individual years. Data for 1995 onwards are three-year averages, with the year shown being the last year of the three-year period.
2. The percentages for the two bottom lines in the headline indicator graph for Education and training do not sum to the top line. This is because the top line includes people who have a qualification where the level cannot be determined. Some of the people with a higher education qualification (the bottom line in the graph) may also have a vocational qualification. As the data are based on people's level of highest non-school qualification, it is not possible to give the proportions of people with both qualifications.

The educational attainment indicators refer to vocational and higher education qualifications (defined below) which are also called non-school qualifications. Qualifications are defined as formal certifications, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at a particular level are excluded.

Vocational education qualifications include Advanced Diploma, Advanced Certificate, Diploma, and Certificates I to IV. Higher education qualifications include Postgraduate Degree, Master Degree, Graduate Diploma, Graduate Certificate, and Bachelor Degree.

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include the higher education qualifications and vocational education qualifications listed above. Collectively, this group of qualifications is referred to as non-school qualifications instead of post-school qualifications because students can now study for vocational qualifications, such as certificates and diplomas, while attending high school.

3. The unemployment rate (bottom line in the graph for Work) is the number of unemployed persons expressed as a percentage of the labour force. It is an annual average.

The extended labour force underutilisation rate (the top line in the graph for Work) takes the measure of underutilised labour beyond what is conventionally measured in the labour force. The measure includes the unemployed, people in underemployment and some people who are marginally attached to the labour force (defined below). It relates to September each year.

People who are unemployed, underemployed and marginally attached to the labour force are defined as follows:

Unemployed - people who were not employed during the reference week, but who had actively looked for work in the four weeks up to the reference week and were available to start work in the reference week.

Underemployed - people working less than 35 hours a week who wanted to work additional hours and were available to start work with more hours.

People who are marginally attached to the labour force and included in the extended labour force underutilisation rate are either:

- People actively looking for work, who were not available to start work in the reference week, but were available to start work within four weeks.

- Discouraged jobseekers. These are people wanting to work who are available to start work within four weeks, and whose main reason for not looking for work was that they believed they would not find a job for labour market-related reasons.

4. Reference year 2002-2003.

5. Disposable (after income tax) income amounts are equivalised by applying the OECD equivalence scale. The equivalised income amounts are also adjusted for changes in living costs as measured by the Consumer Price Index (CPI). No surveys were conducted in 1998-99 and 2001-02. The respective data for these two years shown in the graph for Financial hardship is just the midpoint of the previous year and the following year. The base of each index is at 1994-95 and equals 100.

The low income group comprises households in the 2nd and 3rd income deciles from the bottom of the distribution after being ranked, from lowest to highest, by their equivalised disposable income. The middle income group comprises people in the middle income quintile (5th and 6th deciles) after being ranked, from lowest to highest, by their equivalised disposable income.

People falling into the lowest decile are excluded because, for many of them, the value of their income does not appear to be an appropriate indicator of the economic resources available to them. Their income tends to be significantly lower than would be available to them if they were reliant on the safety net of income support provided by social security pensions and allowances. At the same time, their expenditure levels tend to be higher than those of people in the second and third deciles, indicating that they have access to economic resources other than income, such as wealth, to finance their expenditure.

6. Chain volume measure; reference year 2002-2003.

7. Excludes seabirds, marine mammals and animals living on islands far offshore. Extinctions data have been backcast to take account of rediscoveries. Includes subspecies. There is likely to be a time lag between a species being identified as threatened and being listed.

8. Forest conversion is land that has been cleared for the first time.

According to the National Carbon Accounting System of the Australian Greenhouse Office (AGO), "the results for 2000 and 2001 will increase when areas of uncertain 'Land Use Change' are confirmed/included during the next update". **Greenhouse Gas Emissions from Land Use Change in Australia, Results of the National Carbon Accounting System 1988-2001**, AGO, 2003, Canberra.

9. The National Land and Water Resources Audit (NLWRA) defines land as having a high potential to be affected by salinity if groundwater levels are within two metres of the surface or within two to five metres with well demonstrated rising watertables. Remnant vegetation includes planted perennial vegetation.

The NLWRA's salinity projections are based on a range of assumptions and data including an assumption of a continued rate of increase and no change to water balances.

10. Australia has 325 surface water management areas, based on the country's 246 river basins, and 538 groundwater management units (hydrologically connected water systems).

A highly developed water source is one where 70%-100% of the sustainable yield of water is extracted. An overdeveloped water source is one where more than 100% of the sustainable yield is extracted.

11. Data are from representative sites in Sydney (Liverpool), Melbourne (Footscray), Brisbane (Central Business District), Perth (Duncraig) and Adelaide (Thebarton), and have been combined in proportion to each city's population. The data are the number of days when the National Environment Protection Measures (NEPM) average daily PM10 (defined below) goal is exceeded. The PM10 data from each state environmental protection agency (EPA) was obtained using the Tapered Element Oscillation Microbalance (TEOM) method, which continuously monitors PM10 levels in the air averaged over a 24 hour period. 1997 was the first year all of the five EPAs used this method.

Fine particles (PM10) are particles of any substance less than 10 micrometres in diameter, and include sulphates, nitrates, carbon and silica. They are generated by fossil fuel combustion, domestic wood fires and some industries, and also arise naturally from wind-blown dust, pollens and bushfires. The human health effects are many and depend on the size and chemical composition of the particles. Fine particles can penetrate deep into the lungs where they may be absorbed into the blood. The smallest particles can affect eyesight. Some particles are carcinogenic, while others are toxic or cause allergies. General effects include respiratory problems which can lead to sickness or even death among sensitive people. Some plants and animals are particularly sensitive to fine particle pollution. Lichens for example are often among the first life forms to be affected, while particles can cover the leaves of larger plants and damage their ability to photosynthesise.

12. The indicator measures million tonnes (megatonnes) of carbon dioxide (CO<sub>2</sub>) equivalent emissions. Different greenhouse gases have different effects and remain in the atmosphere for different periods of time. A tonne of methane, for example, contributes as much to global warming as 21 tonnes of CO<sub>2</sub>. To assess the impact of the different gases together, emissions of each gas are converted to a common CO<sub>2</sub> equivalent scale and added. For example, a tonne of methane and a tonne of CO<sub>2</sub> would equate to 22 tonnes of greenhouse gases CO<sub>2</sub> equivalent.

The data are based on estimates produced using Kyoto accounting methods.

13. The victimisation rates for personal crimes are for assault and robbery victims among people aged 15 or over, and sexual assault among people aged 18 and over.

14. The victimisation rates for household crimes are for actual or attempted break-ins and motor vehicle thefts across all households.
15. Taken from the essay [Multiple disadvantage in Measures of Australia's Progress 2004, Cat. no. 1370.0 \(pp 162-171\)](#). Families with dependents include children under 15 as well as children aged 15-24 who are full-time students.
16. According to the Australian Electoral Commission's Annual report 2003-04 "the results of the Sample Audit Fieldwork indicate that, at 1 March 2004, an estimated 95% of the eligible population was enrolled for the correct division". Australian Electoral Commission (AEC) 2004, **Annual report 2003-04**, AEC, Canberra.
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[Contents](#) >> Criteria for choosing headline indicators

### Headline indicators

Measures of Australia's Progress is designed for the Australian public, and the commentaries are meant to be easily understood by readers who may not be expert in either the subject matter or statistical methods. In many cases, our choice of indicator has had to strike a balance between considerations of approachability, technical precision, and the availability and quality of data.

The headline indicators in this publication are concerned with assessing dimensions of Australia's progress, not with explaining the underlying causes of change.

In the view of the ABS, a good headline indicator should:

- be relevant to the particular dimension of progress
- where possible, focus on outcomes for the dimension of progress (rather than on say, the inputs or processes used to produce outcomes)
- show a 'good' direction of movement (signalling progress) and 'bad' direction (signalling regress) - at least when the indicator is considered alone, with all other dimensions of progress kept equal
- be supported by timely data of good quality
- be available as a time series
- be available at a national level
- be sensitive to changes in the underlying phenomena captured by the dimension of progress
- be summary in nature
- preferably be capable of disaggregation by, say, geography or population group
- be intelligible and easily interpreted by the general reader.

For some dimensions, it is not yet possible to compile an ideal indicator meeting all these criteria. So a proxy or no indicator has been

presented, pending further statistical development work by the ABS or other researchers.

### **Process of developing headline indicators**

When deciding which statistical indicators should be used to encapsulate each aspect of Australian life, we were guided by expert advice as well as the criteria listed above. During the development of MAP, the ABS undertook wide-ranging consultation with experts and the general community of users regarding the indicators that would be ideal for each aspect of Australian life and the best approximations to those ideal indicators that are currently available. For some aspects - health, crime, income, productivity and air quality, for example - there was already some broad consensus regarding indicators that would meet MAP's criteria. But for other aspects - social cohesion, democracy and governance and biodiversity, for example - the effort to develop statistical indicators is more recent, and stakeholder agreement has not yet been reached. For the newer or less settled aspects, MAP generally provides an array of indicators and invites readers to form a view about progress.

Our first step was to take each dimension of progress in turn, and to ask 'Why is this dimension particularly important to Australia's progress? What are the key facets of progress in that dimension that any headline indicator should seek to express?'

There were usually several competing indicators that might be included. In choosing among them, each of the criteria were considered, as illustrated below.

Indicators should focus on the outcome rather than, say, the inputs or other influences that generated the outcome, or the government and other social responses to the outcome. For example, an outcome indicator in the health dimension should if possible reflect people's actual health status and not, say, their dietary or smoking habits, or public and private expenditure on health treatment and education. Input and response variables are of course important to understanding why health outcomes change, but the outcome itself must be examined when one is assessing progress.

It was also judged important that movements in any indicator could be positively or negatively associated with progress by most Australians. For instance, one might consider including the number of divorces as an indicator for family life. But an increase in that number is ambiguous - it might reflect, say, a greater prevalence of unhappy marriages, or greater acceptance of dissolving unhappy marriages.

Applying this criterion relating to signal depends crucially on interpreting movements in one indicator, assuming that the other indicators of progress are unchanged. For example, some would argue that economic growth has, at times, brought environmental problems in its wake, or even that the problems were so severe that the growth was undesirable. Others would argue that strong environmental protection might be retrograde to overall progress because it hampers economic growth. However, few would argue against economic growth or strong environmental protection if every other measure of progress was unaffected: that is, if growth could be achieved without environmental harm, or if environmental protection could be achieved without impeding economic growth. Of course, although keeping other things equal might be possible in theory, it seldom, if ever, occurs. The links between indicators are important, and [Measures of Australia's Progress 2004](#) discusses these links after trends in the individual indicators have been analysed.

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## 1383.0.55.001 - Measures of Australia's Progress: Summary Indicators, 2005

**ARCHIVED ISSUE** Released at 11:30 AM (CANBERRA TIME) 20/04/2005

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The headline indicators form a core set of statistics for reporting on Australia's progress. But the 15 dimensions we have chosen will change over time, because, for example:

- Thinking may change about what is important to national progress.
- There may be conceptual developments relating to one or more dimensions of progress (such as social cohesion).
- There may be statistical developments that allow us to measure aspects of progress for which we do not at present construct indicators.

The commentary accompanying each headline indicator discusses what an ideal progress indicator might be for each dimension. The conceptually ideal indicators may, in some cases, help guide the continuing development of Measures of Australia's Progress.

There are countless initiatives at the international, national and sub-national levels around the world. A selection is mentioned below.

- Statistics New Zealand's **Monitoring Progress Towards a Sustainable New Zealand**, at: <http://www.stats.govt.nz>
- The United Kingdom Government's **Indicators of Sustainable Development**, at: [www.sustainable-development.gov.uk/indicators/index.htm](http://www.sustainable-development.gov.uk/indicators/index.htm)
- In 2003, the USA's General Accounting Office, in cooperation with the National Academies, hosted a forum on Key National Performance Indicators in Washington D.C. The objective of the Forum was to discuss whether and how to develop a set of key national indicators for the United States of America. More information is at: <http://www.gao.gov/npi>

Further to the above, the USA's General Accounting Office released a report in November 2004 - **Informing Our Nation: Improving How to Understand and Assess the USA's Position and Progress**. It can be found at: <http://www.gao.gov/new.items/d051.pdf>

- The Irish Central Statistical Office's **Measuring Ireland's Progress**, at:[http://www.cso.ie/releasespublications/measuring\\_irelands\\_progress\\_vol1\\_2.htm](http://www.cso.ie/releasespublications/measuring_irelands_progress_vol1_2.htm)
- The Australian Collaboration (a group of major national non-governmental organisation peak bodies including: Australian Conservation Foundation, Australian Council of Social Services, Australian Consumers Association, Australian Council for Overseas Aid, Aboriginal and Torres Strait Islander Commission, Federation of Ethnic Communities' Councils of Australia, and National Council of Churches) produced two reports **Where are we going: comprehensive social, cultural and environmental reporting**, and **A Just and Sustainable Australia**. They can be found at: [www.australiancollaboration.com.au/reports.htm](http://www.australiancollaboration.com.au/reports.htm)
- The OECD's report (2001) **The Well-being of Nations: the Role of Human and Social Capital** covers the integration of societal wellbeing measures with economic and environmental ones. It can be found at:<http://new.SourceOECD.org>
- The OECD's World Forum on Key Indicators (2004): **Press Releases, Speeches and Statements for the OECD World Forum on Key Indicators**. It can be found at:[http://www.oecd.org/document/50/0,2340,en\\_21571361\\_31834434\\_33791602\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/50/0,2340,en_21571361_31834434_33791602_1_1_1_1,00.html)
- Other useful references are provided by the International Institute of Sustainable Development's web site, at:<http://www.iisd.ca>

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### Single printable version

The entire contents of Measures of Australia's Progress: Summary Indicators 2005 has been placed in this webpage to enable it to be printed at once. If a single printable version of the entire contents is not required, the version with multiple webpages is recommended.

To return to the multiple page version, use [MAP 2005 - Contents](#)

## Measures of Australia's Progress: Summary Indicators 2005

**Measures of Australia's Progress: Summary Indicators 2005** focuses on the 15 headline dimensions and their headline indicators (some headline dimensions have more than one indicator, and some have none). Only the headline indicators are graphed. However, the dimensions without a headline indicator still mention in their commentaries indicators which attempt to measure one or more essential aspects in these dimensions. All indicators are based on the most recent data available at 20 April 2005.

## INTRODUCTION

### Introduction - why the ABS developed Measures of Australia's Progress

Recent years have seen growing public interest in assessing whether life in Australia and other countries is getting better, and whether the level of (or pace of improvement in) the quality of life can be sustained into the future. Although most regard Gross Domestic Product (GDP)

as an important measure of progress, there are many who believe that it should be assessed in conjunction with other measures of progress. This is the prime reason the ABS looked for an alternative approach.

A national statistical agency like the ABS has an important role to play in providing the statistical evidence that will allow assessments of progress to be made by users - those who formulate and evaluate policy, researchers and the community. Through its publications, electronic releases of data and other means, the ABS provides a rich array of statistics relevant to assessing progress. But the very size of the information base means that it is not so accessible to many people. Moreover, most ABS products provide a window into one or a few aspects of life in Australia - say, health, education, income, water - whereas a comprehensive assessment of progress demands that these aspects of life are examined together.

In response, ABS has produced **Measures of Australia's Progress** (MAP) which provides a digestible selection of statistical evidence that will allow Australians to make their own assessment of whether life in Australia is getting better. MAP is not intended as a substitute for the full array of statistics - indeed, the ABS hopes that many readers will be led to read our other publications on the aspects of society, the economy and the environment that particularly interest them.

### Choosing the progress indicators

The progress indicators presented in MAP were chosen in four key steps.

- First, we defined three broad domains of progress (social, economic and environmental).
- Second, we made a list of potential progress dimensions within each of the three domains.
- Third, we chose a subset of dimensions, 15 in all, for which we would try to find indicators.
- Fourth, we chose an indicator (or indicators) to give statistical expression to each of those dimensions. To achieve this we identified potential 'headline' indicators which have the capacity to encapsulate major features of change in the given aspect of Australian life.

The set of headline indicators plays a special role in MAP, and particular considerations of values and preferences arise. MAP 2002 and MAP 2004 presented several hundred indicators overall. However, to assist readers in gaining a quick understanding of the bigger picture about national progress, these publications also presented a more compact suite of 15 headline indicators, covering the 15 dimensions (some dimensions have more than one indicator, and some have none). **Measures of Australia's Progress: Summary Indicators 2005** focuses on these headline indicators.

Our eventual selection of indicators was guided by expert advice and by the criteria described in Criteria for choosing headline indicators (below). One criterion was regarded as essential to headline indicators - namely, that most Australians would agree that each headline indicator possessed a 'good' direction of movement (signalling progress, when that indicator is viewed alone) and a 'bad' direction of movement (signalling regress, when that indicator is viewed alone). This good-direction / bad-direction distinction raises unavoidably the question of values and preferences.

Once the ABS had drafted its initial list of candidate headline indicators, it undertook extensive consultation to test whether the list accorded with users' views. After the release of the first edition of MAP in 2002, some commentators disagreed with our choice of headline indicators, usually on the grounds of knock-on effects or interactions - that is, the good/bad direction of change may be ambiguous when one takes into consideration the real-world associations between movements in the headline indicator and movements in other indicators. Whether a reader agrees with the ABS choice of headline indicators or not, he or she is free to peruse the whole suite of several hundred indicators in MAP 2002 and MAP 2004 and to assign high weight, low weight or no weight to each, as his or her own values and preferences dictate.

Some readers of MAP have tried to infer an ABS view about the relative importance of the different aspects of Australian life from the number of aspects discussed under the social, economic and environmental headings, or from the number of headline indicators or the number of

indicators overall. No such inference can or should be drawn. It is not for the national statistical agency to say what relative importance should be accorded to, say, changes in health, income or air quality. The ABS based its decision about how many indicators to present not on relative value but on statistical grounds - is it possible to find one or a few indicators that would encapsulate the changes in the given aspect of life? Is it possible to sum or otherwise combine indicators?

To illustrate - changes in national wealth can be summarised well in one indicator (real net worth per capita), whereas a range of indicators are needed to depict significant changes in families, communities and social cohesion.

The place of values and preferences in MAP is well illustrated by its treatment of income distribution and equity. Many Australians believe that a more even distribution of income would represent progress; some would argue that, other things equal, any shift to more even distribution would be an improvement; others would argue only for a somewhat more even distribution than at present - say, one that reduces extreme disparities between high and low incomes. Other Australians would not accept that more even distribution of income would represent progress. Thus, when developing MAP, the ABS decided that measures of income distribution should appear only as supplementary indicators, not as headline indicators.

## PROGRESS IN AUSTRALIA: THE HEADLINE DIMENSIONS

The following commentaries on the 15 headline dimensions are structured around four broad areas of progress:

- Individuals
- The economy and economic resources
- The environment
- Living together in our society

The table below shows the grouping of the headline dimensions under these areas of progress, and provides points of interest from the following commentaries for each dimension.

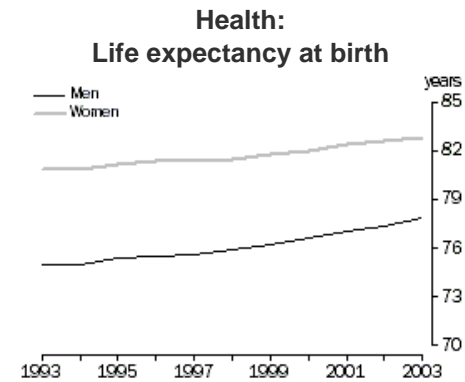
Individuals	The economy and economic resources	The environment	Living together in our society
<p><b>Health:</b> 1993 - 2003, Life expectancy increases for men and women.</p> <p><b>Education and training:</b> 1994 - 2004, More Australians obtain a non-school qualification.</p> <p><b>Work:</b> 1994 - 2004, The unemployment</p>	<p><b>National income:</b> 1993-94 - 2003-04, Australia experiences significant real income growth.</p> <p><b>Financial hardship:</b> 1994-95 - 2002-03, The real income of low income Australians increases.</p> <p><b>National wealth:</b> 1994 - 2004, Australia's real net</p>	<p><b>The natural landscape:</b> 1993 - 2004, Some of the indicators suggest regress in this dimension.</p> <p><b>The human environment:</b> 1997 - 2003, Air quality is generally good, even though forest fires have obscured this trend.</p>	<p><b>Family, community and social cohesion:</b> 1995 - 2002, More Australians are participating in voluntary work.</p> <p><b>Crime:</b> 1993 - 2002, Rates of personal crime increase slightly, and household crime rates change little.</p> <p><b>Democracy, governance and citizenship:</b></p>



rate generally decreases.	<p>worth per capita rises.</p> <p><b>Housing:</b> 2001, Housing in Australia is generally good.</p> <p><b>Productivity:</b> 1993-94 - 2003-04, Australia experiences productivity improvement.</p>	<p><b>Oceans and estuaries:</b> 2002, Most estuaries are largely unmodified and many are pristine.</p> <p><b>International environmental concerns:</b> 1992 - 2002, Greenhouse gas emissions generally rise.</p>	1996 - 2001, More long-term overseas-born residents are becoming citizens.
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## INDIVIDUALS

When measuring progress for individuals, we consider three headline dimensions - Health; Education and training; and Work. All three indicators for Individuals suggest progress during the past decade.

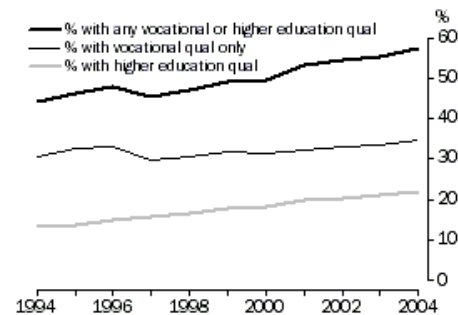


For technical information see Endnote 1.

Source: Deaths, Australia, 2003, cat. no. 3302.0.

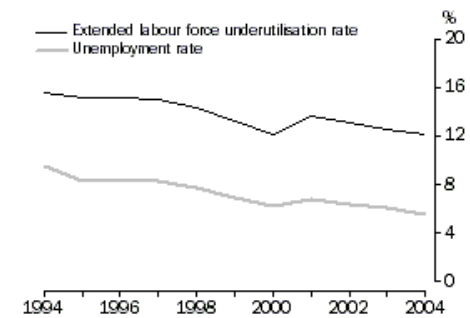
**Education and training:**  
People aged 25-64 with a vocational or higher education qualification

**Work:**  
Unemployment and extended labour force underutilisation rates



For technical information see Endnote 2.

Source: Survey of Education and Work, Australia, 2004, cat. no. 6227.0.



For technical information see Endnote 3.

Source: Australian Labour Market Statistics, April 2005, cat. no. 6105.0.

## Health

Life expectancy at birth is a measure of how long someone born in a particular year might expect to live if mortality patterns for that year remained unchanged over their lifetime. It is one of the most widely used indicators of population health. It focuses on length of life rather than its quality, but it usefully summarises the health of the population.

Australian life expectancy improved during the decade 1993 to 2003. A boy born in 2003 could expect to live to be nearly 78, while a girl could expect to reach nearly 83 - increases since 1993 of three and two years respectively. Women tend to live longer than men, and this is reflected in the differences in life expectancy throughout the 20th century. Although a girl born in 2003 could still expect to live more than five years longer than a boy, in recent years life expectancy at birth for men increased more quickly than for women.

While Australians are living longer than ever before, there is a good deal of debate about whether life expectancy will continue to increase. However, there is no doubt that there is more room for improvement among some groups of the population than among others. In particular, Indigenous Australians do not live as long as other Australians, and the difference is marked.

## Education and training

Education and training help people to develop knowledge and skills that may be used to enhance their own living standards and those of the broader community. For an individual, educational attainment is widely seen as a key factor to a rewarding career. For the nation as a whole, having a skilled workforce is vital to supporting ongoing economic development and improvements in living conditions.

The progress indicator used here measures the attainment of formal non-school qualifications. This headline indicator is the proportion of the population aged 25-64 with a vocational or higher education qualification (Endnote 2). The indicator shows that there has been a rise in the proportion of people with non-school qualifications. Between 1994 and 2004 the proportion of 25-64 year olds with a vocational or higher education qualification rose from 44% to 58%, continuing a trend seen for many decades.

The increase over the last decade in the proportion of people with non-school qualifications is mainly being driven by the substantial increase in the proportion of people with a higher education qualification (i.e. a bachelor degree or above). Between 1994 and 2004, the proportion of people aged 25-64 with a higher education qualification increased from 13% to 22%. This was more than double the increase in the proportion of people whose highest qualification was a vocational qualification, which rose from 31% to 35% over the same period.

## Work

Paid work is the means through which most people obtain the economic resources needed for day to day living, for themselves and their dependants, and to meet their longer term financial needs. Having paid work contributes to a person's sense of identity and self-esteem. People's involvement in paid work also contributes to economic growth and development. The official unemployment rate has been chosen as the headline indicator, because of its relevance to the economic and social aspects of work.

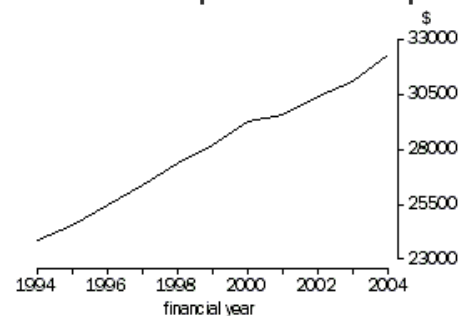
This rate is the number of unemployed persons expressed as a percentage of the labour force, and is a widely used measure of underutilised labour resources in the economy. The graph also includes the extended labour force underutilisation rate, which takes the measure of underutilised labour beyond what is conventionally measured in the labour force. This rate measures the number of unemployed and underemployed people, as well as some people marginally attached to the labour force, but it still tracks the unemployment rate closely (Endnote 3).

Measures of underutilised labour such as the unemployment rate are sensitive to changes in the economy. In 1994, the annual average unemployment rate stood at 9.5%, a relatively high value, reflecting the downturn of the early 1990s. Since then it has generally fallen, to stand at 5.5% in 2004. The extended labour force underutilisation rate fell from 15.5% in September 1994 to 12.2% in September 2004.

## THE ECONOMY AND ECONOMIC RESOURCES

When measuring progress for the economy and economic resources, we consider five headline dimensions (although indicators are only available for four) - National income; Financial hardship; National wealth; Housing; and Productivity. The headline indicators available suggest some progress for these dimensions over the past decade.

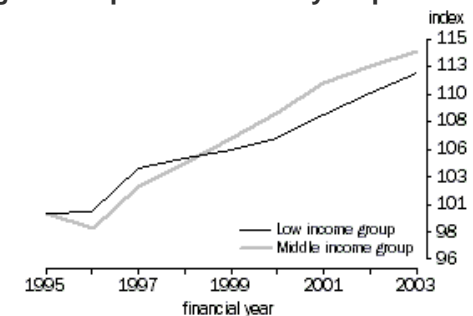
**National income:**  
Real net national disposable income per capita



For technical information see Endnote 4.

Source: Australian System of National Accounts 2003-2004, cat. no. 5204.0.

**Financial hardship:**  
Average real equivalised weekly disposable income

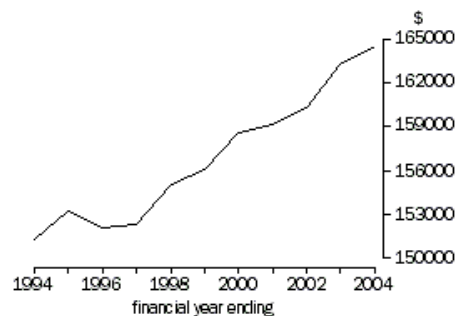


For technical information see Endnote 5.

Source: Household Income and Income Distribution, Australia, 2002-03, cat. no. 6523.0.

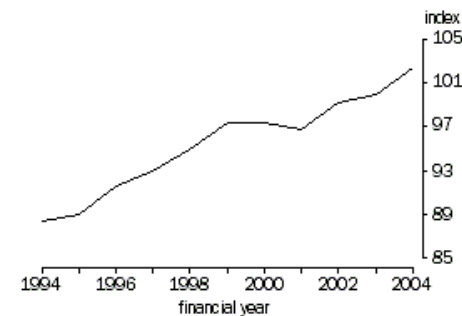
**National wealth:**  
Real national net worth per capita

**Productivity:**  
Multifactor productivity



For technical information see Endnote 6.

Source: Australian System of National Accounts 2003-2004, cat. no. 5204.0.



Source: Australian System of National Accounts 2002-2003, cat. no. 5204.0.

## National income

National income reflects Australia's capacity to purchase goods and services. It influences material living standards and is also important for other aspects of progress. There are many different ways of measuring income. The headline measure - real net national disposable income per capita - has a variety of features that make it an informative indicator of national progress.

- It is a per capita measure. Total income could rise during periods of population growth, even though there may have been no improvement in Australians' average incomes.
- It is a real measure - it is adjusted to remove the effects of price change. Nominal or current price income could rise during periods of inflation, even though there may have been no increase in Australians' real capacity to buy goods and services.
- It takes account of income flows between Australia and overseas, and is adjusted for changes in the relative prices of our exports and imports (our 'terms of trade'). These international influences on Australia's income can increase or decrease Australians' capacity to buy goods and services.
- It is a net measure - it takes account of the depreciation of machinery, buildings and other produced capital used in the production process. Hence, it reflects the income Australia can derive today while keeping intact the fixed capital needed to generate future income.

Australia experienced significant real income growth during the past decade. Between 1993-94 and 2003-04, real net national disposable income per capita grew by an average annual rate of 3.1% a year.

## Financial hardship

Society generally accepts that people should have access to some minimum standard of consumption of goods and services. People in financial hardship do not have the economic resources to enjoy such an opportunity, and are likely to have relatively low income and low wealth. The headline indicator focuses on changes in the average disposable (after tax) income of people close to the bottom of the income distribution (Endnote 5). Although it provides no information about the number of people living in financial hardship, it does indicate whether the income of low income groups is rising or falling.

From 1994-95 to 2002-03 the real income of low income Australians rose by 12%. For those people who were in this income grouping for the entire period, their rising incomes would on average have provided a capacity to increase their real standard of living, other things being equal. While some would interpret this increase in the real income of the low income group as progress, others would consider that it also

needs to be weighed against changes in community standards. Although there is no direct measure of these, one approach is to compare changes with those of 'middle' Australians. And so the graph also shows changes in the real income of the middle income group, which grew by 14%.

The headline indicator considers low income which is commonly associated with financial hardship. However, financial hardship is a multidimensional issue and is also often associated with problems such as lack of participation in work, substance abuse, poor health, poor education, poor housing, crime, social exclusion and a lack of opportunity for children. It can also be associated with changes in life fortunes.

### **National wealth**

National wealth and national income are very closely related. Along with the skills of the work force, a nation's wealth has a major effect on its capacity to generate income. Produced assets (such as machinery and equipment) are used in income-generating economic activity. Income, in turn, provides for saving that enables the accumulation of new wealth. 'Real national net worth per capita' exhibits features that make it an informative indicator of national progress.

- It is a net measure - it shows the amount by which Australia's assets exceed its liabilities to the rest of the world.
- It is a per capita measure. Total wealth could rise if the population grew, even though there may have been no improvement in Australians' average wealth.
- It is a real measure - it is adjusted to remove the effects of price change.

Between June 1994 and June 2004, Australia's real net worth per capita rose at an average annual rate of 0.8%. However, the headline indicator does not take account of everything that might be regarded as valuable. For example, it doesn't include - native forests and other natural assets not used for economic production; or human capital (e.g. knowledge and skills); or social capital (e.g. social networks and trust).

### **Housing**

Housing provides people with shelter, security and privacy. Having a suitable place to live is fundamental to people's identity and wellbeing, and there are many aspects to housing that affect the quality of people's lives. Dwelling attributes, such as their size, number of bedrooms, physical condition, location relative to amenities and services, and their affordability, are all important in this regard but there is currently no single indicator that succinctly captures whether people's many needs and desires for suitable housing are being met.

Housing in Australia is generally good, and Australians are continuing to invest significantly in the homes that they own. In the decade to 2004, the value of land and dwellings owned by the household sector increased by 150% (in current price terms) and in 2004 represented more than half of the value of all assets owned by the sector.

Australians are tending to live in smaller household groups, with the average household size shrinking by 14% over the 20 years to 2001. While 4% of private dwellings across Australia in 2001 required an extra bedroom to accommodate the residents of those dwellings, 75% of private dwellings had one or more bedrooms spare. But poor or inadequate housing is currently a problem for some groups, especially for Aboriginal and Torres Strait Islander peoples living in remote areas.

### **Productivity**

A nation's productivity is the volume of goods and services it produces (its output) for a given volume of inputs (such as labour and capital). A nation that achieves productivity growth produces more goods and services from its labour, capital, land, energy and other resources. Much, but not all of Australia's output growth can be accounted for by increases in the inputs to production. The amount by which output growth

exceeds input growth is the productivity improvement. Productivity growth can generate higher incomes. Benefits might also accrue in the form of lower output prices.

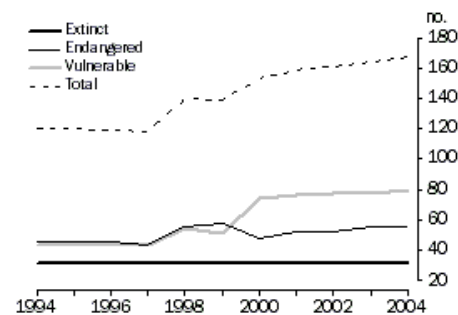
Productivity can be measured in a variety of ways. The most comprehensive Australian measure available at present is multifactor productivity for the market sector. Multifactor productivity represents that part of the growth in output that cannot be explained by growth in labour and capital inputs. During the decade 1993-94 to 2003-04, Australia experienced improved rates of productivity growth and multifactor productivity rose 1.5% per year on average.

During the past few decades, successive Australian governments have enacted reforms that have sought to create an economic environment favourable to increased competition, better allocation of resources and more innovation. Key policy influences have included reduction of tariffs and other barriers to international trade, relaxation of barriers to international investment, changes to the structure and rates of taxation, domestic competition policy and reforms to financial, labour and other markets. Economists continue to investigate the links each of these varied influences has on productivity growth, and many are not yet well understood.

## THE ENVIRONMENT

When measuring progress for the environment, we consider four headline dimensions - The natural landscape; The human environment; Oceans and estuaries; and International environmental concerns. It is difficult to obtain national time series data that encapsulate the changes in Australia's natural resources. However, for those dimensions where such data are available, progress over the past decade was varied.

**The natural landscape:  
Biodiversity: Extinct, endangered and  
vulnerable birds and mammals**

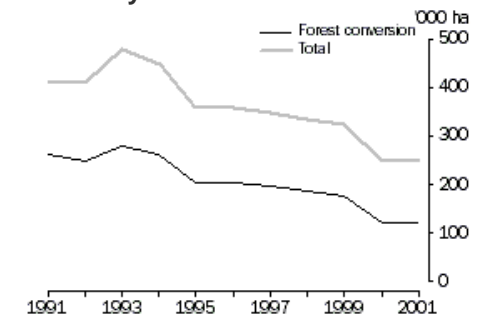


For technical information see Endnote 7.

Source: National List of Threatened Fauna,  
Department of the Environment and Heritage, 2004.

**The natural landscape:  
Land: Assets affected by, or at risk from, salinity - 2000**

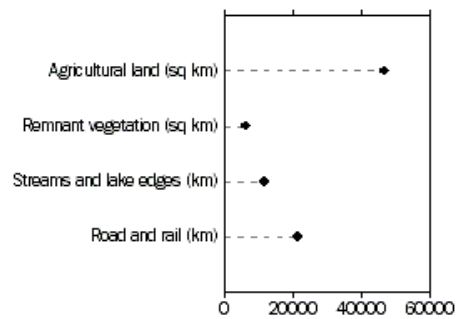
**The natural landscape:  
Biodiversity: Annual area of land cleared**



For technical information see Endnote 8.

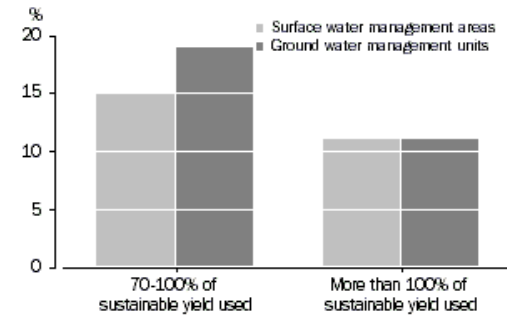
Source: National Greenhouse Gas Inventory,  
Australian Greenhouse Office 2003.

**The natural landscape:  
Inland waters: Highly developed and  
overdeveloped water sources - 2000**



For technical information see Endnote 9.

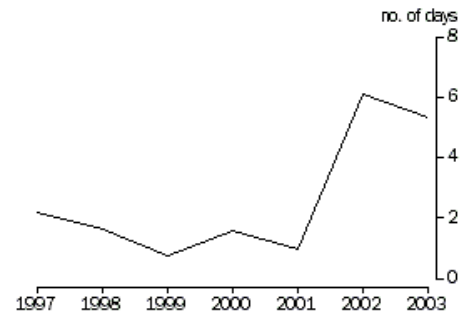
Source: Australian Dryland Salinity Assessment 2000,  
National Land and Water Resources Audit 2001.



For technical information see Endnote 10.

Source: Australian Water Resources Assessment 2000,  
National Land and Water Resources Audit 2001.

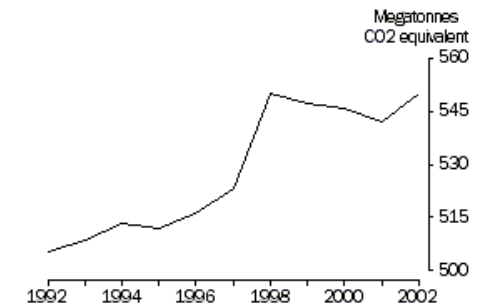
### The human environment: Urban air quality, days fine particle health standards were exceeded



For technical information see Endnote 11.

Source: State environmental protection agencies, 2004.

### International environmental concerns: Australia's net greenhouse gas emissions



For technical information see Endnote 12.

Source: National Greenhouse Gas Inventory,  
Australian Greenhouse Office 2004.

## The natural landscape - biodiversity, land, and inland waters

### Biodiversity

No single indicator can hope to encapsulate biodiversity, and so we focus on two aspects: the numbers of extinct and threatened Australian birds and mammals; and the clearing of native vegetation.

Although the numbers of threatened birds and mammals are only a small part of the overall biological diversity, a decline in these groups of species threatens ecological processes and can point to a wider decline in biodiversity. The list should not be construed as a census of threatened species as they can be added to or removed from the list as their status changes or due to improved knowledge (Endnote 7). However, it is as accurate an accounting of the status of these species as can be currently compiled.

Between 1994 and 2004 the number of terrestrial bird and mammal species assessed as extinct, endangered or vulnerable rose by 39% from 120 to 167 (of which 66 were birds and 101 were mammals). Much of this increase took place between 1997 and 2000 and was driven mainly by the increase in the numbers of vulnerable birds and mammals. In June 2004 just under half of these species were vulnerable, one-third

were more seriously threatened (endangered) and the remaining fifth were presumed extinct. There were increases in the numbers of both endangered and vulnerable species, but the rise in species assessed as vulnerable was much higher (86%) than those assessed as endangered (22%).

Land clearing destroys plants and local ecosystems and removes the food and habitat on which other native species rely. Clearing helps weeds and invasive animals to spread, causes greenhouse gas emissions and can lead to soil degradation, such as erosion and salinity, which in turn can harm water quality. Native bushland has cultural, aesthetic and recreational importance to many Australians. The land clearing estimates include information about forest conversion (land cleared for the first time) and reclearing, both of which have environmental impacts.

Land clearance decreased by about 40% between 1991 and 2001. The area of land protected in national parks and the like increased. In 2001, an estimated 248,000 ha of Australian land was cleared, down from 415,000 ha cleared in 1991. Less than half of the land cleared in 2001 (120,000 ha) was 'converted' (cleared for the first time), which is less than half the area converted in 1991. The figures do not distinguish between the kinds of vegetation cleared.

## **Land**

Australia's soils are old and shallow, and are susceptible to degradation by agricultural activities. Salinity occurs when the water table rises, bringing natural salts to the surface (in sufficient quantity, these salts are toxic to most plants). When trees or other deep-rooted vegetation are replaced with vegetation that uses less water, the water table may rise to cause dryland salinity. Dryland salinity threatens biodiversity, through loss of habitat on land and in water, and also impacts on water resources, pipelines, houses and roads. Areas near water are often worst affected because they occupy the lowest parts of the landscape where saline groundwater first reaches the surface.

In 2000, about 46,500 sq kms (4.6 million hectares) of agricultural land were already affected with a high salinity hazard or in an area at high risk from shallow watertables. The cost to agricultural productivity was estimated at \$187 million, which was less than the cost of other forms of soil degradation, such as \$1.5 billion due to acidity in the same year.

However, the costs of salinity go further as it can impact on structures, as well as flora and fauna. The salt contained in rising groundwater levels can damage bitumen and concrete and so affect roads, footpaths, housing, pipelines and other assets. In 2000, about 11,800 kms of streams and lake edges, as well as 1,600 kms of rail and 19,900 kms of roads were affected or at risk. By 2050, these figures could rise to 41,300 kms of stream and lake edges, and 5,100 km of rail and 67,400 kms of road according to projections published by the National Land and Water Resources Audit in 2001. (Endnote 9).

## **Inland waters**

Water is fundamental to the survival of people and other organisms. Apart from drinking water, much of our economy (agriculture in particular) relies on water. The condition of freshwater ecosystems has a critical impact on the wider environment.

In 2000, about 11% of Australia's surface water management areas were overdeveloped. Another 15% were approaching sustainable extraction limits (i.e. highly developed). Therefore, in 2000 about one-quarter of Australia's surface water management areas were classed as highly used or overused. This proportion was greater for groundwater management units, where 11% were overdeveloped, and a further 19% were highly developed (Endnote 10). Detailed national time series data are not available, but a variety of partial evidence points to a decline in the quality of some of Australia's waterways.

## **The human environment**



Human settlements have an impact on the landscape and seascape that surrounds them. They can also provide a home for native plants and animals. But the environmental quality of settlements is perhaps most important because it has an influence on those who live and work within them. Several environmental concerns are associated with human settlements. It is difficult to conceive an ideal headline indicator which might measure progress against each and so we choose one. For about a decade, the Australian public has been more concerned about air pollution than about any other environmental problem.

Overall, air quality in Australia is relatively good and has generally improved during the 1990s, although there has been a rise in recorded fine particle (PM10) concentrations (Endnote 11) after 2001 mainly due to irregular events, such as forest fires. Even so, our cities do not suffer from the acute pollution problems found in many OECD countries. It is important to note that daily changes in air quality depend on ambient conditions, like wind direction and the monitoring station's proximity to pollution sources. Further, high concentrations of fine particles from irregular events, such as forest fires, can obscure the longer trend in levels produced by regular sources, like car emissions.

The 2002 peak of about six days in the graph for selected urban areas was mainly due to severe forest fires and dust storms around the Sydney area where the National Environment Protection Measures (NEPM) goal was exceeded on 13 days that year. The goal was also exceeded on six days in Brisbane in 2002, while Melbourne, Perth and Adelaide recorded two, one and no such days respectively that year. There was a decline in 2003, even though bush fires and dust storms also caused the NEPM goal to be exceeded on 10 days in Melbourne, while Sydney recorded six days. However, Brisbane and Perth only recorded one day each that exceeded the goal in 2003, and Adelaide recorded no such days.

### **Oceans and estuaries**

Australia's coastal and marine regions support a large range of species, many of them found only in Australian waters. The marine environment is also important to Australian society and the economy. Many of the ways in which we use our oceans, beaches and estuaries can affect the quality of the ocean's water and the diversity of life within it. Although this dimension has no headline indicator, it does have important aspects which different organisations have attempted to measure.

One such measure is the Estuarine Condition Index, developed by the National Land and Water Resources Audit (NLWRA). The index assesses the condition of about 1,000 estuaries around the Australian coast. Because estuaries occur at the borders of marine and freshwater ecosystems, they are influenced by the tides and also by fresh water from the land. And so measuring the condition of estuaries not only reports on the state of our oceans, it sheds light on how land use around the water that flows into the estuary is affecting the sea. The more modified an estuary the greater the pressures on it; in 2002 the NLWRA assessed estuary conditions as:

- near-pristine - 50%.
- largely unmodified - 22%.
- modified - 19%.
- extensively modified - 9%.

### **International environmental concerns**

The health of our environment depends largely on the actions of Australians. But some environmental concerns transcend national boundaries: our environment can be influenced by the actions of other countries, and we, in turn, can influence other countries' environments. Our contribution to these international concerns is an important aspect of progress. Global warming is widely perceived as the most significant international environmental concern and Australia's greenhouse gas emissions are the focus of the headline indicator.

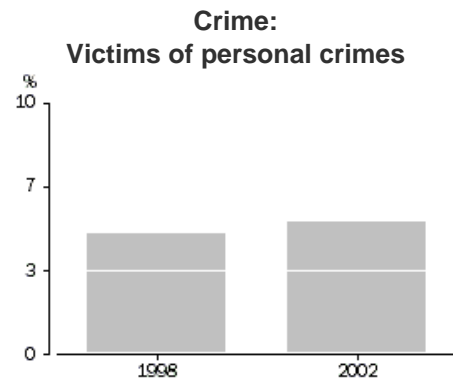
The main gases in the atmosphere, nitrogen and oxygen, are almost completely transparent to the sun's rays. But water vapour, carbon dioxide and other gases form a blanket around the Earth, trapping heat - a process called the **greenhouse effect**. Human activity is

increasing atmospheric concentrations of existing greenhouse gases (such as carbon dioxide and methane) and adding new gases such as chlorofluorocarbons (CFCs). Net emissions are estimated using information about total emissions, less any credits from forest sinks (the credits are estimates of how much carbon dioxide has been absorbed by new and expanding forests established in Australia since 1990).

Australia's total net greenhouse emissions in 2002 were about 550 megatonnes (Mt) CO<sub>2</sub> equivalent (Endnote 12), an increase of 8.8% since 1992. Emissions generally rose over most of the period, with the sharpest rise (about 5%) between 1997 and 1998. There was a slight decline in emissions during the next three years to 2001. This was followed by an increase of 1.5% between 2001 and 2002, which returned total net greenhouse emissions to their 1998 level (550 Mt CO<sub>2</sub> equivalent).

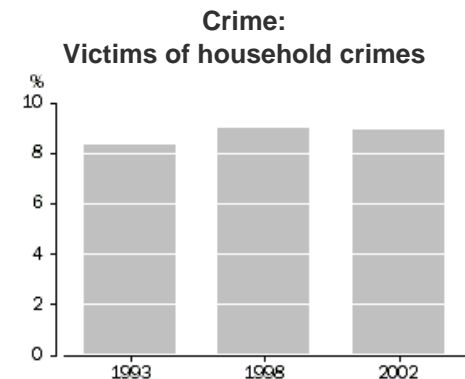
## LIVING TOGETHER IN OUR SOCIETY

When measuring progress for Living together in our society, we consider three headline dimensions - Family, community and social cohesion; Crime; and Democracy, governance and citizenship. However, headline indicators are only available for the second dimension.



For technical information see Endnote 13.

Source: Crime and Safety, Australia, 2002, cat. no. 4509.0.



For technical information see Endnote 14.

Source: Crime and Safety, Australia, 2002, cat. no. 4509.0.

## Family, community and social cohesion

Family and community are important aspects of society, but there is no single indicator that captures all that might be important. The quality and strength of people's relationships and bonds with others - their family, friends and the wider community - are important ingredients of the level of social cohesion. And a more cohesive society is one in which communities are strong and inclusive, and where fewer people 'fall through the cracks'. When the support offered by people's families and communities declines or is absent, it can contribute to serious social exclusion and problems.

The family can be seen as the wellspring from which some of the dimensions crucial to social cohesion develop, such as trust, social support and the extension of social networks. Most Australians live in households as members of a family unit. A key role of families is to raise capable and functioning people. In 2004, 40% of the 5.5 million families in Australia contained children under 15. While the majority of these families were couple families (77%), between 1994 and 2004 the proportion of one parent families with children under 15 increased from 17% to 23%. Most one parent families are supported by government and many by family, friends and ex-partners. Nevertheless, one parent families generally have a much lower level of economic wellbeing than couple families. In 2002, about 12% of couple families with dependents had an equivalised household income in the bottom 20%, compared with about 40% of one parent families with dependents. (Endnote 15)

The vast range of services provided within communities by groups, clubs and charitable organisations are a crucial adjunct to the care provided by families and the institutionalised care provided by governments. Strong community bonds can be formed through things like volunteering and donating money to groups and organisations in the community. The likelihood that people will voluntarily give their time to do some work for an organisation or group might be regarded as one of the stronger expressions of social capital, as it involves providing assistance, fulfilling needs and providing opportunities in the community. Between 1995 and 2002, the proportion of people aged 18 years and over who reported that they did some voluntary work during the previous 12 months increased from 24% to 34%.

## **Crime**

Crime takes many forms and can have a major impact on the wellbeing of victims, their families and friends, and the wider community. Those most directly affected may suffer financially, physically, psychologically and emotionally, while the fear of crime can affect people and restrict their lives in many ways. There are other costs as well, including the provision of law enforcement services by the police, courts and associated legal services, and corrective services.

Although it would be desirable to have a single indicator of the cost of crime to society, one does not exist. Instead the headline indicators are two measures of victims of common criminal offences: 'household crimes' and 'personal crimes'. The former refers to actual or attempted break-in and motor vehicle theft. The latter refers to assault, sexual assault or robbery. Personal crimes are not restricted to crimes committed in the victim's home, and so include crimes at people's place of work or study and so on. The victimisation rates for personal crimes are for assault and robbery victims among people aged 15 or over, and sexual assault among people aged 18 and over. The victimisation rates for household crimes are for actual or attempted break-ins and motor vehicle thefts across all households.

Though small, the changes in the prevalence rates for victims of personal crimes between 1998 and 2002 showed an increase from 4.8% to 5.3%. Most of these people were assaulted. Between 1993 and 2002, there was little change in the proportion of households that were the victim of a household crime (an actual or attempted break-in or motor vehicle theft) and it remained at a little below 9%.

## **Democracy, governance and citizenship**

National life is influenced, not just by material qualities such as economic output, health and education, but also by many intangible qualities such as the quality of our public life, the fairness of our society, the health of democracy and the extent to which citizens of Australia participate actively in their communities or cooperate with one another. Whilst democracy is supported globally, there are many different views about the ways to measure progress in this dimension. There are many possible indicators that relate to governance, democracy and citizenship.

It has been argued that a healthy democracy needs citizens who care, are willing to take part, and are capable of helping to shape the common agenda of a society. And so participation - whether through the institutions of civil society, political parties, or the act of voting - is seen as important to a stable democracy. In Australia, enrolment and voting in State and Federal elections is compulsory. In June 2004, the Australian Electoral Commission (AEC) estimated that 95% of eligible Australians were enrolled to vote. However, there were differences in the proportions enrolled among different age groups and the AEC estimates that 80% of eligible 18-25 year olds were enrolled. (Endnote 16)

Only Australian citizens can vote in elections, and so the proportion of people living here permanently who are citizens is one measure of support for democratic decision making in Australia (although people become citizens for many reasons, not necessarily to vote in elections). In 2001, about 95% of the people living in Australia were citizens. However, not all people residing in Australia are eligible for citizenship. Therefore, when considering progress it can be more informative to consider the changing proportion of Australian residents who have lived here for at least two years (those generally eligible for citizenship) who are citizens. In 1991, about 65% of long-term overseas-born residents were Australian citizens. This had risen to just below 73% by 1996 and by 2001 almost 75% of overseas-born residents were Australian

citizens. However, changes in this indicator may be affected by changes in the number of long-term residents who are eligible for citizenship.

## ENDNOTES

1. Data for 1993 and 1994 are based on individual years. Data for 1995 onwards are three-year averages, with the year shown being the last year of the three-year period.
2. The percentages for the two bottom lines in the headline indicator graph for Education and training do not sum to the top line. This is because the top line includes people who have a qualification where the level cannot be determined. Some of the people with a higher education qualification (the bottom line in the graph) may also have a vocational qualification. As the data are based on people's level of highest non-school qualification, it is not possible to give the proportions of people with both qualifications.

The educational attainment indicators refer to vocational and higher education qualifications (defined below) which are also called non-school qualifications. Qualifications are defined as formal certifications, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. Statements of attainment awarded for partial completion of a course of study at a particular level are excluded.

Vocational education qualifications include Advanced Diploma, Advanced Certificate, Diploma, and Certificates I to IV. Higher education qualifications include Postgraduate Degree, Master Degree, Graduate Diploma, Graduate Certificate, and Bachelor Degree.

Non-school qualifications are awarded for educational attainments other than those of pre-primary, primary or secondary education. They include the higher education qualifications and vocational education qualifications listed above. Collectively, this group of qualifications is referred to as non-school qualifications instead of post-school qualifications because students can now study for vocational qualifications, such as certificates and diplomas, while attending high school.

3. The unemployment rate (bottom line in the graph for Work) is the number of unemployed persons expressed as a percentage of the labour force. It is an annual average.

The extended labour force underutilisation rate (the top line in the graph for Work) takes the measure of underutilised labour beyond what is conventionally measured in the labour force. The measure includes the unemployed, people in underemployment and some people who are marginally attached to the labour force (defined below). It relates to September each year.

People who are unemployed, underemployed and marginally attached to the labour force are defined as follows:

Unemployed - people who were not employed during the reference week, but who had actively looked for work in the four weeks up to the reference week and were available to start work in the reference week.

Underemployed - people working less than 35 hours a week who wanted to work additional hours and were available to start work with more hours.

People who are marginally attached to the labour force and included in the extended labour force underutilisation rate are either:

- People actively looking for work, who were not available to start work in the reference week, but were available to start work within four weeks.

- Discouraged jobseekers. These are people wanting to work who are available to start work within four weeks, and whose main reason for not looking for work was that they believed they would not find a job for labour market-related reasons.

4. Reference year 2002-2003.

5. Disposable (after income tax) income amounts are equivalised by applying the OECD equivalence scale. The equivalised income amounts are also adjusted for changes in living costs as measured by the Consumer Price Index (CPI). No surveys were conducted in 1998-99 and 2001-02. The respective data for these two years shown in the graph for Financial hardship is just the midpoint of the previous year and the following year. The base of each index is at 1994-95 and equals 100.

The low income group comprises households in the 2nd and 3rd income deciles from the bottom of the distribution after being ranked, from lowest to highest, by their equivalised disposable income. The middle income group comprises people in the middle income quintile (5th and 6th deciles) after being ranked, from lowest to highest, by their equivalised disposable income.

People falling into the lowest decile are excluded because, for many of them, the value of their income does not appear to be an appropriate indicator of the economic resources available to them. Their income tends to be significantly lower than would be available to them if they were reliant on the safety net of income support provided by social security pensions and allowances. At the same time, their expenditure levels tend to be higher than those of people in the second and third deciles, indicating that they have access to economic resources other than income, such as wealth, to finance their expenditure.

6. Chain volume measure; reference year 2002-2003.

7. Excludes seabirds, marine mammals and animals living on islands far offshore. Extinctions data have been backcast to take account of rediscoveries. Includes subspecies. There is likely to be a time lag between a species being identified as threatened and being listed.

8. Forest conversion is land that has been cleared for the first time.

According to the National Carbon Accounting System of the Australian Greenhouse Office (AGO), "the results for 2000 and 2001 will increase when areas of uncertain 'Land Use Change' are confirmed/included during the next update". **Greenhouse Gas Emissions from Land Use Change in Australia: Results of the National Carbon Accounting System 1988-2001**, AGO, 2003, Canberra.

9. The National Land and Water Resources Audit (NLWRA) defines land as having a high potential to be affected by salinity if groundwater levels are within two metres of the surface or within two to five metres with well demonstrated rising watertables. Remnant vegetation includes planted perennial vegetation.

The NLWRA's salinity projections are based on a range of assumptions and data including an assumption of a continued rate of increase and no change to water balances.

10. Australia has 325 surface water management areas, based on the country's 246 river basins, and 538 groundwater management units (hydrologically connected water systems).

A highly developed water source is one where 70%-100% of the sustainable yield of water is extracted. An overdeveloped water source is one where more than 100% of the sustainable yield is extracted.

11. Data are from representative sites in Sydney (Liverpool), Melbourne (Footscray), Brisbane (Central Business District), Perth (Duncraig) and Adelaide (Thebarton), and have been combined in proportion to each city's population. The data are the number of days when the National Environment Protection Measures (NEPM) average daily PM<sub>10</sub> (defined below) goal is exceeded. The PM<sub>10</sub> data from each state environmental protection agency (EPA) was obtained using the Tapered Element Oscillation Microbalance (TEOM) method, which continuously monitors PM<sub>10</sub> levels in the air averaged over a 24 hour period. 1997 was the first year all of the five EPAs used this method.

Fine particles (PM<sub>10</sub>) are particles of any substance less than 10 micrometres in diameter, and include sulphates, nitrates, carbon and silica. They are generated by fossil fuel combustion, domestic wood fires and some industries, and also arise naturally from wind-blown dust, pollens and bushfires. The human health effects are many and depend on the size and chemical composition of the particles. Fine particles can penetrate deep into the lungs where they may be absorbed into the blood. The smallest particles can affect eyesight. Some particles are carcinogenic, while others are toxic or cause allergies. General effects include respiratory problems which can lead to sickness or even death among sensitive people. Some plants and animals are particularly sensitive to fine particle pollution. Lichens for example are often among the first life forms to be affected, while particles can cover the leaves of larger plants and damage their ability to photosynthesise.

12. The indicator measures million tonnes (megatonnes) of carbon dioxide (CO<sub>2</sub>) equivalent emissions. Different greenhouse gases have different effects and remain in the atmosphere for different periods of time. A tonne of methane, for example, contributes as much to global warming as 21 tonnes of CO<sub>2</sub>. To assess the impact of the different gases together, emissions of each gas are converted to a common CO<sub>2</sub> equivalent scale and added. For example, a tonne of methane and a tonne of CO<sub>2</sub> would equate to 22 tonnes of greenhouse gases CO<sub>2</sub> equivalent.

The data are based on estimates produced using Kyoto accounting methods.

13. The victimisation rates for personal crimes are for assault and robbery victims among people aged 15 or over, and sexual assault among people aged 18 and over.
14. The victimisation rates for household crimes are for actual or attempted break-ins and motor vehicle thefts across all households.
15. Taken from the essay Multiple disadvantage in Measures of Australia's Progress 2004, Cat. no. 1370.0 (pp 162-171). Families with dependents include children under 15 as well as children aged 15-24 who are full-time students.
16. According to the Australian Electoral Commission's Annual report 2003-04 "the results of the Sample Audit Fieldwork indicate that, at 1 March 2004, an estimated 95% of the eligible population was enrolled for the correct division". Australian Electoral Commission (AEC) 2004, **Annual report 2003-04**, AEC, Canberra.

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## **CRITERIA FOR CHOOSING HEADLINE INDICATORS**

### **Headline indicators**

Measures of Australia's Progress is designed for the Australian public, and the commentaries are meant to be easily understood by readers who may not be expert in either the subject matter or statistical methods. In many cases, our choice of indicator has had to strike a balance between considerations of approachability, technical precision, and the availability and quality of data.

The headline indicators in this publication are concerned with assessing dimensions of Australia's progress, not with explaining the underlying causes of change.

In the view of the ABS, a good headline indicator should:

- be relevant to the particular dimension of progress
- where possible, focus on outcomes for the dimension of progress (rather than on say, the inputs or processes used to produce outcomes)
- show a 'good' direction of movement (signalling progress) and 'bad' direction (signalling regress) - at least when the indicator is considered alone, with all other dimensions of progress kept equal
- be supported by timely data of good quality
- be available as a time series
- be available at a national level
- be sensitive to changes in the underlying phenomena captured by the dimension of progress
- be summary in nature
- preferably be capable of disaggregation by, say, geography or population group
- be intelligible and easily interpreted by the general reader.

For some dimensions, it is not yet possible to compile an ideal indicator meeting all these criteria. So a proxy or no indicator has been presented, pending further statistical development work by the ABS or other researchers.

### **Process of developing headline indicators**

When deciding which statistical indicators should be used to encapsulate each aspect of Australian life, we were guided by expert advice as well as the criteria listed above. During the development of MAP, the ABS undertook wide-ranging consultation with experts and the general community of users regarding the indicators that would be ideal for each aspect of Australian life and the best approximations to those ideal indicators that are currently available. For some aspects - health, crime, income, productivity and air quality, for example - there was already some broad consensus regarding indicators that would meet MAP's criteria. But for other aspects - social cohesion, democracy and governance and biodiversity, for example - the effort to develop statistical indicators is more recent, and stakeholder agreement has not yet been reached. For the newer or less settled aspects, MAP generally provides an array of indicators and invites readers to form a view about progress.

Our first step was to take each dimension of progress in turn, and to ask 'Why is this dimension particularly important to Australia's progress? What are the key facets of progress in that dimension that any headline indicator should seek to express?'

There were usually several competing indicators that might be included. In choosing among them, each of the criteria were considered, as illustrated below.

Indicators should focus on the outcome rather than, say, the inputs or other influences that generated the outcome, or the government and other social responses to the outcome. For example, an outcome indicator in the health dimension should if possible reflect people's actual health status and not, say, their dietary or smoking habits, or public and private expenditure on health treatment and education. Input and response variables are of course important to understanding why health outcomes change, but the outcome itself must be examined when one is assessing progress.

It was also judged important that movements in any indicator could be positively or negatively associated with progress by most Australians. For instance, one might consider including the number of divorces as an indicator for family life. But an increase in that number is ambiguous - it might reflect, say, a greater prevalence of unhappy marriages, or greater acceptance of dissolving unhappy marriages.

Applying this criterion relating to signal depends crucially on interpreting movements in one indicator, assuming that the other indicators of progress are unchanged. For example, some would argue that economic growth has, at times, brought environmental problems in its wake, or even that the problems were so severe that the growth was undesirable. Others would argue that strong environmental protection might be retrograde to overall progress because it hampers economic growth. However, few would argue against economic growth or strong environmental protection if every other measure of progress was unaffected: that is, if growth could be achieved without environmental harm, or if environmental protection could be achieved without impeding economic growth. Of course, although keeping other things equal might be possible in theory, it seldom, if ever, occurs. The links between indicators are important, and Measures of Australia's Progress 2004 discusses these links after trends in the individual indicators have been analysed.

## **CONTINUING DEVELOPMENT AND OTHER INITIATIVES**

The headline indicators form a core set of statistics for reporting on Australia's progress. But the 15 dimensions we have chosen will change over time, because, for example:

- Thinking may change about what is important to national progress.
- There may be conceptual developments relating to one or more dimensions of progress (such as social cohesion).
- There may be statistical developments that allow us to measure aspects of progress for which we do not at present construct indicators.

The commentary accompanying each headline indicator discusses what an ideal progress indicator might be for each dimension. The conceptually ideal indicators may, in some cases, help guide the continuing development of Measures of Australia's Progress.

There are countless initiatives at the international, national and sub-national levels around the world. A selection is mentioned below.

- Statistics New Zealand's **Monitoring Progress Towards a Sustainable New Zealand**, at: [www.stats.govt.nz](http://www.stats.govt.nz)
- The United Kingdom Government's **Indicators of Sustainable Development**, at: [www.sustainable-development.gov.uk/indicators/index.htm](http://www.sustainable-development.gov.uk/indicators/index.htm)
- In 2003, the USA's General Accounting Office, in cooperation with the National Academies, hosted a forum on Key National Performance Indicators in Washington D.C. The objective of the Forum was to discuss whether and how to develop a set of key national indicators for the United States of America. More information is at: [www.gao.gov/npa](http://www.gao.gov/npa)

Further to the above, the USA's General Accounting Office released a report in November 2004 - **Informing Our Nation: Improving How to Understand and Assess the USA's Position and Progress**. It can be found at: [www.gao.gov/new.items/d051.pdf](http://www.gao.gov/new.items/d051.pdf)

- The Irish Central Statistical Office's **Measuring Ireland's Progress**, at: [www.cso.ie/releasespublications/measuring\\_irelands\\_progress\\_vol1\\_2.htm](http://www.cso.ie/releasespublications/measuring_irelands_progress_vol1_2.htm)
- The Australian Collaboration (a group of major national non-governmental organisation peak bodies including: Australian Conservation Foundation, Australian Council of Social Services, Australian Consumers Association, Australian Council for Overseas Aid, Aboriginal and Torres Strait Islander Commission, Federation of Ethnic Communities' Councils of Australia, and National Council of Churches) produced two reports **Where are we going: comprehensive social, cultural and environmental reporting**, and **A Just and Sustainable Australia**. They can be found at: [www.australiancollaboration.com.au/reports.htm](http://www.australiancollaboration.com.au/reports.htm)
- The OECD's report (2001) **The Well-being of Nations: the Role of Human and Social Capital** covers the integration of societal wellbeing measures with economic and environmental ones. It can be found at: [new.SourceOECD.org](http://new.SourceOECD.org)
- The OECD's World Forum on Key Indicators (2004): **Press Releases, Speeches and Statements for the OECD World Forum on Key Indicators**. It can be found at: [www.oecd.org/document/50/0,2340,en\\_21571361\\_31834434\\_33791602\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/50/0,2340,en_21571361_31834434_33791602_1_1_1_1,00.html)
- Other useful references are provided by the International Institute of Sustainable Development's web site, at: [www.iisd.ca](http://www.iisd.ca)

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